FIN1XX CURRENT ISSUES IN FINANCE

TO: PROFESSOR SUH
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SUBJECT: USEC INC.: COST OF CAPTIAL AND CAPITAL BUDGETING
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Summary

USEC appears to have grown measurably over the years 2002-2005. Much of this growth was derived from an increase in the price of their outputs and a bargain for the price of their inputs. In addition, USEC seems to be building up its current assets. This is presumably for liquidity reasons, as the American Centrifuge Project (ACP) is expected to require a large up-front capital investment. Based on initial capital budgeting analysis, it is recommended to take on the ACP because

- it increases productive capacity in a period of high demand,
- it reduces enrichment costs by 50%, and
- it allows for the closing of a relatively inefficient plant.

Even so, it is necessary to perform a scenario analysis in order to confirm the validity of baseline NPV and IRR figures due to the volatility of potential price changes in enriched uranium products based on several key market conditions.

I. COMPANY BACKGROUND

USEC Inc. (USEC) was created in the early 1990s as a government corporation[1] to restructure the government's uranium-enrichment operation. USEC was the world's leading supplier of enriched uranium fuel for commercial nuclear power plants, holding 50% of the market share of North America and 30% of the global market. In 2006, USEC operated the only uranium-enrichment facility in the U.S. It was a gaseous-diffusion plant in Paducah, Kentucky. In addition to their uranium-enrichment business, USEC also performed related contract and consulting services for the Department of Energy (DOE). Their unique business model faced significant influence from the U.S. government as a result of its contractual obligations with the DOE and other governmental agencies. USEC faced only three other competitions: AREVA/Eurodif (France), Tenex (Russia), and Urenco (Germany).

II. PERFORMANCE EVALUATION (2002 – 2006)

USEC saw strong performance between 2002 and 2005. In this time period, they increased their sales by nearly 13%. USEC benefited highly from the Megatons to Megawatts agreement which stipulated that they would buy 5 million pounds of uranium each year at a fixed price of $20 per pound. The market price of uranium had grown to $46 in 2006, so USEC's margin and bottom benefited from this deal.

Illustrated in Table 2, their COGS increased at a larger rate than their sales, which caused the gross margin and net income to shrink in 2005. This was primarily due to the expiration of their long-term contract with a power supplier that kept electricity costs stable. Without the benefit of the contract, their cost of production relative to their competitors suffered and margins shrunk. USEC could improve their margins if they can find ways to reduce their costs of production. This is one primary reason that led them to pursue the American Centrifuge Project (ACP), discussed further in Section III. USEC also saw a decrease in selling, general, and administrative expenses in 2004 and 2005. This suggests that USEC is improving their operational efficiencies and welcoming cost savings as a result.

Table 1. USEC partial income statement[2]

(in millions)	**2005**	**2004**	**2003**	**2002**
Total revenue	$1,559.3	$1,417.2	$1,436.7	$1,380.2
COGS	1,430.6	1,279.9	1,319.1	1,305.6
Gross margin	128.7	137.3	117.6	74.6

[1] USEC as privatized in 1998, but is now a publically traded company.
[2] Mackovjak, B., & Doe, L. (2008, November 2). USEC Inc. *Darden Business Publishing - University of Virginia*.

S, G, and A	61.9	64.1	69.4	54.1
Operating profit	66.8	73.2	48.2	20.5
Net income	22.3	23.5	9.0	(4.0)

Table 2. USEC annual growth: Select income statement items

(in millions)	**2005**	**2004**	**2003**
Total revenue	10.0%	-1.4%	4.1%
COGS	11.8%	-3.0%	1.0%
Gross margin	-6.3%	16.8%	57.6%
S, G, and A	-3.4%	-7.6%	28.3%
Operating profit	-8.7%	51.9%	135.1%
Net income	-5.1%	161.1%	-325.0%

Figure 1: Total Revenue and COGS Trend for USEC Inc. from 2002 to 2005

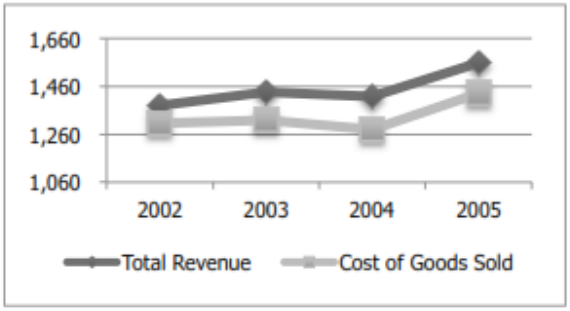
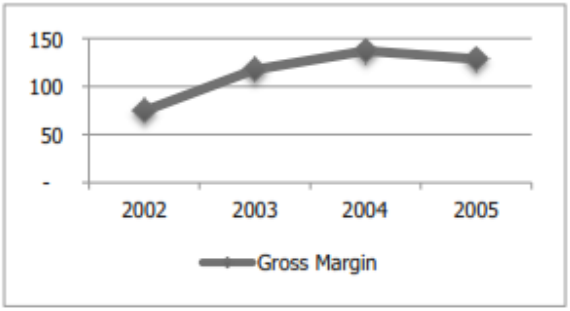
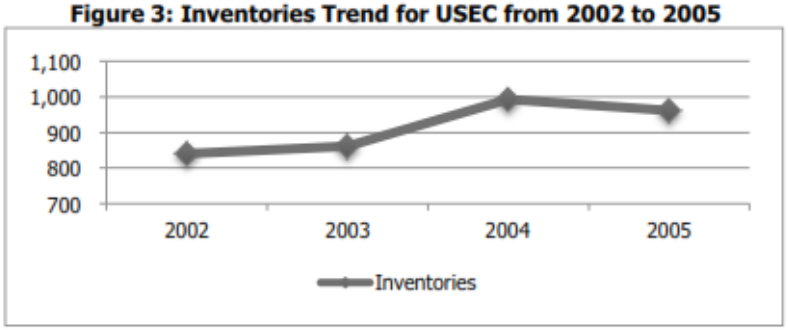


Figure 2: Gross Margin Trend for USEC Inc. from 2002 to 2005



A key issue for USEC when examining their balance sheet is their growing inventory. This was the downside of the Megatons to Megawatts agreement. The requirement of purchasing 5 million pounds of uranium, regardless of customer demand, resulted in a large inventory buildup valued at $20 per pound. This high inventory level can become risky for USEC if their customers do not increase demand for enriched uranium. It is unlikely that the market value of uranium would fall to below $20 in the mean time, so USEC does not have a risk of writing down inventory at a loss. However, inventory build up is wasteful as it is an asset that is not generating any return. USEC's cash and short-term investment balance increased dramatically in 2005 from $174.8 million to $276.9 million. This high cash balance indicates that they have the resources to take on the ACP. USEC's liabilities have remained fairly stable throughout the past four years and is not currently an area of concern.

Figure 3: Inventories Trend for USEC from 2002 to 2005



USEC has a very high net working capital of over $1.067 trillion, depicted in Table 3. The working capital ratio (current assets/current liabilities) of 3.5 suggests that the company is not investing its excess assets. There is no concern of USEC facing short-term financial difficulty, but they certainly are not employing their assets effectively. The primary reason their working capital is so high is due to their build up of inventory from the Megatons to Megawatts deal. With $580 million dollars tied up in inventory, this 'cash' cannot be used to pay off obligations or generate returns. USEC is not operating in the most efficient manner as

suggested by their excessively high working capital, and it would be in their best interest to reduce their inventory. This could be possible with the ACP if demand grows with their new increased capacity.

Table 3. USEC Net Working Capital Values (in millions)[3]

Total Current Assets	$1,495.2
Total Current Liabilities	428.0
Net Working Capital	1,067.2
Working Capital Ratio	3.5

III. USEC'S AMERICAN CENTRIFUGE PROJECT

The ACP offered many significant advantages and benefits for USEC. The ACP would have improved USEC's bottom line and continued their growth in uranium-enrichment. Overall, USEC's main reasoning for pursuing the ACP are:

- Surpass technology of competitors
- Increase capacity to increase revenue
- Reduce electricity costs by 95%
- Eliminate additional capital expenditure and lease payments at the Paducah plant

The ACP was USEC's attempt to surpass the technology of its competitors. They expected new cost efficiencies from the new technology, which would position them as a low-cost producer in the enrichment industry. This cost advantage would come at a very high cost of $1.7 billion during the next five years (2006 – 2010). USEC has only spent $100 million so far. Table 4 illustrates how the rest of the $1.6 million could be spent over the next five years. If construction of the new facility went as planned, it would be fully operational by early 2011. When the ACP is completed, USEC will begin to scale down their operations at the Paducah plant. The $1.7 billion would begin to be depreciated starting in early 2011 over the course of a 15-year useful life. The ACP is very costly to USEC but their decision to pursue the project revolved around their management's confidence that it would have a positive impact on the firm.

Table 4. Projected 5-years USEC spending (in millions)[3]

2006	2007	2008	2009	2010
$185	$300	$350	$350	$415

USEC expected the plant to be able to produce 2.5 million Separate Work Units[4] (SWU) in 2011 and reach its maximum capacity of 6.5 million SKU in 2013. Management firmly believed that USEC would be able to operate at maximum capacity due to enrichment demand. Selling, general, and administrative expenses would rise along with increased revenues from ACP; however, USEC estimated electricity costs would be cut by 95%. This cut in electricity costs was very appealing to USEC since their long-term contract with a power supplier had expired. This caused margins to shrink significantly as the cost to produce one SKU rose to $42. With the reduction in production costs, USEC could see margins grow again, improving the bottom line. USEC would be required to pay a 1% royalty to DOE as compensation for their initial research and development of the centrifuge technology. Management expects the rest of the expenses to increase in line with inflation. After the project is completed, the ACP would require a minimal level of investment. When the ACP is operational, the Paducah plant would be placed in a cold standby, saving USEC $30 million annually in capital expenditures and depreciation and $8 million annually in leases to the DOE.

By expanding their capacity in North America, USEC could successfully constrict entrance from other competitors. Urenco was planning to expand its operations in North America by building a competing uranium-enrichment facility in New Mexico, but they had not begun construction or announced a precise time frame for their project. If USEC completes the ACP, it could increase their market share in North America and prevent Urenco from ever building their new facility. The ACP could be a huge success that doubles the scale of the company and improve its competitive position if they can generate the demand they expect. The level of demand has strong implications that could lead to either a positive or negative NPV for the ACP, determining whether or not USEC should even pursue the project.

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[3] Mackovjak, B., & Doe, L. (2008, November 2). USEC Inc. *Darden Business Publishing - University of Virginia*.

[4] Uranium fuel was sold as Separate Work Units (SWU), a measure of the energy required to convert natural uranium into a blend of enriched uranium.

IV. CONCLUSION

USEC has been very successful in the uranium-enrichment industry with a high level of sales and market share. The ACP could solidify their grasp in the North American market and completely improve their competitive position. The project plays a great importance in determining the ultimate growth and success of USEC in the future. The ACP will be the right path for USEC, especially since the Megatons to Megawatts deal will eventually end, eliminating the low costs of inventory they had benefited from for so long. Reducing production costs and improving margins is absolutely necessary if USEC is to continue to be a strong contender. USEC must do something to strengthen their weaknesses and the ACP could be the best bet if it is proven to have a positive NPV.